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TO

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Board of Patent Appeals &amp; Interference

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CONFIRM FAX: ☐ YES ☒ NO

FROM

Katherine D. Pauley

NAME

703-412-3521

DIRECT PHONE #

209544US2

OUR REFERENCE

App. No. 09/881,675

YOUR REFERENCE

**MESSAGE**

Further to our discussion, please find enclosed a signed copy of the Reply Brief filed on December 22, 2003. If you have any questions, please feel free to contact me at any time.

Unless otherwise indicated or obvious from the nature of the transmittal, the information contained in this facsimile message is attorney privileged and confidential information intended for the use of the individual or entity named above. If the reader of this message is not the intended recipient or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error or are not sure whether it is privileged, please immediately notify us by telephone and return the original message to us at the above address via the U.S. Postal Service at our Expense. Thank You.

✓ OSMM&N File No. 209544US2

Dept.: E/M

By: GJM/SNS/KDP/dm

✓ Serial No. 09/881,675

✓ In the matter of the Application of: Yuuichi ISHIMURA, et al.

✓ For: FIELD-EFFECT SEMICONDUCTOR DEVICE

Due Date: December 22, 2003

The following has been received in the U.S. Patent Office on the date stamped here

- ✓ ☒ Credit Card Form for \$290.00
- ☐ Dep. Acct. Order Form
- ✓ ☒ Cover Letter
- ✓ ☒ Reply Brief (in triplicate)
- ✓ ☒ Request for Oral Hearing

\\ATTY\KDP\20's\209544US\209544 REPLY BRIEF FR 12.22.DOC





Docket No.: 209544US2

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

RE: Application Serial No.: 09/881,675  
Applicants: Youichi ISHIMURA, et al.  
Filing Date: June 18, 2001  
For: FIELD-EFFECT SEMICONDUCTOR DEVICE  
Group Art Unit: 2811  
Examiner: TRAN, T.

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SIR:

Attached hereto for filing are the following papers:

Reply Brief (in triplicate)  
Request for Oral Hearing

Our credit card payment form in the amount of \$290.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

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Registration No. 25,599

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Surinder Sachar  
Registration No. 34,423

DOCKET NO: 209544US2

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
YUICHI ISHIMURA, ET AL. : EXAMINER: TRAN, T.  
SERIAL NO: 09/881,675 :  
FILED: JUNE 18, 2001 : GROUP ART UNIT: 2811  
FOR: FIELD-EFFECT :  
SEMICONDUCTOR DEVICE :

REQUEST FOR ORAL HEARING

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant's representative hereby respectfully requests that an Oral Hearing be scheduled in the above-identified application.

A credit card payment in the amount of \$290.00 to cover the fee is enclosed herewith and any further charges may be made against the Attorney of Record's Deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
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EXAMINER: TRAN, T.

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FILED: JUNE 18, 2001 :

GROUP ART UNIT: 2811

FOR: FIELD-EFFECT  
SEMICONDUCTOR DEVICE :

REPLY BRIEF

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

The present Reply Brief is in response to the Examiner's Answer of October 21, 2003.

Appellants respectfully reiterate that the basis for the outstanding rejection set forth in the Examiner's Answer of October 22, 2003, is improper and must be REVERSED.

The outstanding rejection, discussed in detail in the Appeal Brief filed July 31, 2003, is primarily based upon the position that the teachings of Sakurai et al. (U.S. Pat. No. 5,962,877, hereafter Sakurai) are properly combinable with Sakurai et al. (JP 411284176 A, hereafter JP '176) and Okamoto et al. (U.S. Patent No. 4,903,117, hereafter Okamoto). However, Appellants respectfully submit that this is not the case. More specifically Appellants respectfully submit that the teaching or suggestion to make the claimed combination and the reasonable expectation of success is found only in the Appellants' disclosure, and not in the prior art references.

Sakurai relates to an inverter apparatus having an improved switching element. However, as admitted in the Final Office Action, at page 3, Sakurai does not disclose or

Application No. 09/881,675

Reply to Examiner's Answer to Appeal Brief dated October 22, 2003

suggest the barrier metal layer recited in the pending claims. Sakurai also fails to disclose or suggest that including nitrogen in the barrier metal layer might provide any benefits, or that an emitter might be formed of aluminum. Additionally, as admitted in the Examiner's Answer at page 9, Sakurai is silent about the material being used for the emitter electrode 12.

JP '176 provides *pure* aluminum at an emitter electrode while a barrier layer is provided between the emitter electrode MOS gate. JP '176 indicates that a barrier layer is useful for an emitter composed of *pure* aluminum.

As the barrier metal layer of JP '176 is specifically described as useful with *pure* aluminum and Sakurai does not disclose or suggest any type of aluminum emitter, it is respectfully submitted that one of ordinary skill in the art would not have been motivated to combine the structure described in Sakurai with a barrier metal layer of the differing structure of JP '176.

Similarly, because Okamoto does not disclose or suggest any type of emitter, Okamoto necessarily does not disclose or suggest that a barrier layer containing nitrogen would be beneficial in a structure having an aluminum emitter. Therefore, the rationale for the combination cannot be found within the references' teachings.

Thus, the Final Office Action appears to rely upon the knowledge generally available to one of ordinary skill in the art as providing the motivation to combine the reference teachings. However, the level of skill in the art cannot be relied upon to provide the suggestion to combine references.<sup>1</sup>

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<sup>1</sup> *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999).

Application No. 09/881,675

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In fact, it is only in light of the Appellants' written description in the specification and identification of the deficiencies of the prior art that the applied combination of Sakurai, JP '176 and Okamoto might become obvious. Thus, Appellants respectfully submit that one of ordinary skill in the art would not have combined the teachings in Sakurai, JP '176, and Okamoto, as suggested in the Office Action, and therefore the outstanding rejection must be REVERSED.

Respectfully submitted,

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Surinder Sachar  
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Attorneys of Record

DOCKET NO: 209544US2

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :

Youichi ISHIMURA, et al. :

EXAMINER: TRAN, T.

SERIAL NO: 09/881,675 :

FILED: JUNE 18, 2001 :

GROUP ART UNIT: 2811

FOR: FIELD-EFFECT  
SEMICONDUCTOR DEVICE :

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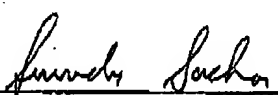
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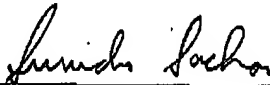
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REMARKS:

Auditor Shirley L. Lewis